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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/580,648	05/30/2000	Asif Dawoodi Gandhi	2925-0380P	1505

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER
MILLER, BRANDON J

ART UNIT	PAPER NUMBER
2683	9

DATE MAILED: 05/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/580,648	GANDHI ET AL.	
	Examiner	Art Unit	
	Brandon J Miller	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 May 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over H'mimy in view of Ishikawa.

Regarding claim 1 H'mimy teaches controlling access of a subscriber station to a wireless communications system (see col. 1, lines 43-46 & 66-67). H'mimy also teaches a first and second performance indicator for a reverse link associated with a subscriber (see col. 1, lines 66-67 and col. 2, lines 30-36) and establishing a blocking threshold value (see col. 2. lines 45-49). H'mimy does not teach deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first performance indicator to a blocking threshold value. Ishikawa teaches deciding whether to grant or deny access to a subscriber station seeking access to a communications system based on a comparison and a blocking threshold (see col. 6, lines 48-67, col. 7, lines 1-19, and col. 12, lines 44-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy adapt to include deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first

performance indicator to a blocking threshold value because this would allow a wireless communication system to maintain a specific level of performance.

Regarding claim 2 Ishikawa teaches denying access to a subscriber station if a performance indicator exceeds a blocking threshold value to prevent degradation of performance (see col. 12, lines 44-58 and col. 13, lines 24-28).

Regarding claim 3 Ishikawa teaches granting access to a subscriber station if a performance indicator is less than or equal to a blocking threshold (see col. 7, lines 1-20 and col. 12, lines 44-58).

Regarding claim 6 H'mimy and Ishikawa teach a device as recited in claim 1 except for a blocking threshold range defined by a maximum blocking threshold, and a minimum blocking threshold, which are determined based on estimated variation in the reverse frame error rate associated with a subscriber station. H'mimy teaches establishing a minimum blocking threshold and a maximum threshold (see col. 3, lines 11-14 & 20-23). H'mimy also teaches a variation in bit error rate (see col. 5, lines 24-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy and Ishikawa adapt to include a blocking threshold range defined by a maximum blocking threshold, and a minimum blocking threshold, which are determined based on estimated variation in the reverse frame error rate associated with the subscriber station because this would allow a wireless communication system to operate within a specific performance range.

Regarding claim 13 H'mimy and Ishikawa teach a device as recited in claim 2 and is rejected given the same reasoning as above.

Regarding claim 14 H'mimy and Ishikawa teach a device as recited in claim 3 and is rejected given the same reasoning as above.

Claims 4-5, 7-12, 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over H'mimy in view of Ishikawa and Egner.

Regarding claim 4 H'mimy and Ishikawa teach a device as recited in claim 1 except for obtaining an interference rise over a thermal noise floor as a first performance indicator and loading as a second performance indicator with the interference rise over a thermal noise floor being a ratio of total reverse link power received by a base station to thermal noise power in a receive band and loading indicating how much each subscriber station contributes to interference. H'mimy teaches reverse link channel assignment associated with a subscriber station (see col. 2, lines 30-34), and a first and second performance indicator (see col. 1, lines 66-67 and col. 2, lines 30-35). Egner teaches a rise in system interference (see col. 2, lines 1-2), background noise (see col. 7, lines 41-43), and loading across a wireless communications system (see col. 1, lines 54-57). Egner also teaches signal power received by a base station (see col. 6, lines 59-63) and loading that indicates interference (see col. 2, lines 25-29). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy and Ishikawa adapt to include obtaining an interference rise over a thermal noise floor as a first performance indicator and loading as a second performance indicator with the interference rise over a thermal noise floor being a ratio of total reverse link power received by a base station to thermal noise power in a receive band and loading indicating how much each subscriber station contributes to interference because this would allow a wireless communication system maintain a specific level of performance based on specific performance indicators.

Regarding claim 5 H'mimy, Ishikawa, and Egner teach a device as recited in claim 1 except for obtaining a reverse link frame error rate and dropped call rate to modify a value of a blocking threshold. H'mimy teaches reverse link channel assignment (see col. 2, lines 30-34), a blocking threshold (see col. 2. lines 45-49) and obtaining a bit error rate (see col. 5, lines 24-26). Edgar teaches a dropped call rate (see col. 10, lines 23-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy, Ishikawa, and Egner adapt to include obtaining a reverse link frame error rate and dropped call rate to modify a value of a blocking threshold because this would allow for adjustable access control in a wireless communications system

Regarding claim 7 Egner teaches a loading estimate that includes interference contributions from subscriber stations in a subject cell and interference contributions from subscriber stations in other surrounding cells (see abstract).

Regarding claim 8 H'mimy teaches dynamically adjusting a blocking threshold value (see col. 6, lines 30-33). Egner teaches a loading estimate of a base station and a performance of active subscriber stations using resources of a base station (see col. 1, lines 57-65).

Regarding claim 9 H'mimy, Ishikawa, and Egner teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 10 H'mimy, Ishikawa, and Egner teach a device as recited in claim 1 except for relaxing a blocking threshold to allow more subscriber stations to access a wireless communication system if a reverse link frame error rate and a dropped call rate indicate an acceptable level of performance. H'mimy teaches reverse link channel assignment (see col. 2, lines 31-34), a blocking threshold (see col. 2, lines 45-49) and obtaining a bit error rate (see col.

5, lines 24-26). Ishikawa teaches allowing continued subscriber station access to a communication system (see col. 7, lines 13-19). Edgar teaches a dropped call rate (see col. 10, lines 23-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy, Ishikawa, and Egner adapt to include relaxing a blocking threshold to allow more subscriber stations to access a wireless communication system if a reverse link frame error rate and a dropped call rate indicate an acceptable level of performance because this would allow for adjustable access control in a wireless communication system.

Regarding claim 11 H'mimy teaches refining an adjustment of a blocking threshold value with reference to a performance parameter (see col. 6, lines 30-33). Egner teaches a rise in interference (see col. 2, lines 1-2) and loading across a wireless communications system (see col. 1, lines 55-57).

Regarding claim 12 H'mimy teaches controlling access of a subscriber station to a wireless communications system (see col. 1, lines 43-46 and 66-67) and determining a blocking threshold (see col. 6, lines 30-33). H'mimy does not teach establishing a relationship of blocking threshold values to loading levels on a coverage are of a base station, measuring an actual loading level on a base station associated with a subscriber station seeking access to a wireless communication system, determining a corresponding blocking threshold value based on an actual measured loading level with reference to an established relationship, measuring an interference rise for a reverse channel of a subscriber station, or deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first performance indicator to a blocking threshold value. Egner teaches loading levels on a

coverage of a base station, measuring actual loading levels on a base station associated with a subscriber station seeking access to a wireless communication system, and measuring an interference rise (see col. 2, lines 1-2 & 30-39). Ishikawa teaches deciding whether to grant or deny access to a subscriber station seeking access to a communications system based on a comparison and a blocking threshold (see col. 6, lines 48-67, col. 7, lines 1-19, and col. 12, lines 44-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy adapt to include establishing a relationship of blocking threshold values to loading levels on a coverage are of a base station, measuring an actual loading level on a base station associated with a subscriber station seeking access to a wireless communication system, determining a corresponding blocking threshold value based on an actual measured loading level with reference to an established relationship, measuring an interference rise for a reverse channel of a subscriber station, and deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first performance indicator to a blocking threshold value because this would allow a wireless communication system to maintain a specific level of performance.

Regarding claim 15 H'mimy, Ishikawa, and Egner teach a device as recited in claim 4 and is rejected given the same reasoning as above.

Regarding claim 16 H'mimy and Ishikawa teach a device as recited in claim 5 and is rejected given the same reasoning as above.

Regarding claim 17 H'mimy, Ishikawa, and Egner teach a device as recited in claim 12 except for measuring a reverse frame error rate of a reverse channel and a dropped call rate at a base station through which a subscriber station seeks access, or temporarily increasing a previous

value for use in a deciding step if a measured reverse frame error rate is less than a nominal reverse frame error rate by more than a specified amount and if a measured dropped call rate is less than a nominal dropped call value by more than a specified amount. H'mimy teaches a bit error rate (see col. 5, lines 24-26) and revising a blocking threshold value (see col. 6, lines 30-32). H'mimy also teaches changing a previous value for use in a deciding step (see col. 6, lines 10-20). Egner teaches a dropped call rate at a base station through which a subscriber station seeks access to wireless communications system (see col. 2, lines 30-34 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy, Ishikawa, and Egner adapt to include measuring a reverse frame error rate of a reverse channel and a dropped call rate at a base station through which a subscriber station seeks access, and temporarily increasing a previous value for use in a deciding step if a measured reverse frame error rate is less than a nominal reverse frame error rate by more than a specified amount and if a measured dropped call rate is less than a nominal dropped call value by more than a specified amount because this would allow adjustable access control in a wireless communication system.

Regarding claim 18 H'mimy, Ishikawa, and Egner teach a device as recited in claim 12 except for measuring a reverse frame error rate of a reverse channel and a dropped call rate at a base station through which a subscriber station seeks access, or temporarily decreasing a previous value for use in a deciding step if a measured reverse frame error rate is greater than a nominal reverse frame error rate by more than a specified amount and if a measured dropped call rate is greater than a nominal dropped call value by more than a specified amount. H'mimy teaches a bit error rate (see col. 5, lines 24-26) and revising a blocking threshold value (see col.

6, lines 30-32). H'mimy also teaches changing a previous value for use in a deciding step (see col. 6, lines 10-20). Egner teaches a dropped call rate at a base station through which a subscriber station seeks access to wireless communications system (see col. 2, lines 30-34 and FIG. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy, Ishikawa, and Egner adapt to include measuring a reverse frame error rate of a reverse channel and a dropped call rate at a base station through which a subscriber station seeks access, and temporarily decreasing a previous value for use in a deciding step if a measured reverse frame error rate is greater than a nominal reverse frame error rate by more than a specified amount and if a measured dropped call rate is greater than a nominal dropped call value by more than a specified amount because this would allow adjustable access control in a wireless communication system.

Regarding claim 19 H'mimy, Ishikawa, and Egner teaches a device as recited in claim 12 except for a loading level that is estimated according to the equation in claim 19. Ishikawa does teach a loading level that is estimated according to an equation (see col. 12, lines 54-68). Even though Ishikawa does not specifically teach the equation as recited in claim 19 it would have been obvious to one of ordinary skill in the art to modify the equation to include an equation as specifically recited in claim 19 because this would allow for a wireless communication system to maintain a specific level of performance according to a desired interference measurement.

Regarding claim 20 H'mimy, Ishikawa, and Egner teaches a device as recited in claim 12 except for a loading level that is estimated according to the equation in claim 20. Ishikawa does teach a loading level that is estimated according to an equation (see col. 12, lines 54-68). Even though Ishikawa does not specifically teach the equation as recited in claim 20 it would have

been obvious to one of ordinary skill in the art to modify the equation to include an equation as specifically recited in claim 20 because this would allow for a wireless communication system to maintain a specific level of performance according to a desired interference measurement.

Regarding claim 21 H'mimy teaches controlling access of a subscriber station to a wireless communications system (see col. 1, lines 43-46 and 66-67) and determining a blocking threshold (see col. 6, lines 30-33). H'mimy also teaches a first and second performance indicator for a reverse link associated with a subscriber (see col. 1, lines 66-67 and col. 2, lines 30-35). H'mimy does not teach a load level detector for detecting a load level on a base station, a database for storing a desired signal performance parameter value and a loading level or a blocking manager deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first performance indicator to a blocking threshold. Egner teaches a load level detector for detecting a load level on a base station and a database for storing signals (see col. 2, lines 30-39 and col. 12, lines 20-24). Ishikawa teaches deciding whether to grant or deny access to a subscriber station seeking access to a communications system based on a comparison and a blocking threshold (see col. 6, lines 48-67, col. 7, lines 1-19, and col. 12, lines 44-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the H'mimy adapt to include a load level detector for detecting a load level on a base station, a database for storing a desired signal performance parameter value and a loading level and a blocking manager deciding whether to grant or deny access to a subscriber station seeking access to a wireless communications system based on the comparison of a first performance indicator to a blocking threshold because this would allow a wireless communication system to maintain a certain level of performance.

Regarding claim 22 Egner teaches an interference rise level (see col. 2, lines 1-2) and Peterson teaches granting access of a subscriber station to a wireless communications system (see col. 17, lines 50-53).

Regarding claim 23 Egner teaches a loading level that represents a ratio of active channels of a base station to available channels of a base station (see abstract).

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Talarmo U.S Patent No. 5,790,938 discloses a method for controlling a subscriber station in a mobile radio system.

Bhatia U.S Patent No. 6,112,101 discloses load based priority for a mobile subscriber.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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April 21, 2003

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600